

REMARKS

Claims 1-3, 5-7, 10, and 11 are now pending in the application. Claim 4 is now cancelled. Claims 1, 7, 10, and 11 are now amended. The amendments are fully supported by the application as filed and do not present new subject matter. The amendments are being made to include the subject matter of previously pending Claim 4 into the independent claims. Thus, no further search is necessary. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

TELEPHONIC INTERVIEW

Applicant's representative, Brent G. Seitz, thanks Examiner Talbot for the courtesies extended during the telephonic interview of January 18, 2007. During the interview differences between the invention and the cited art were discussed. The Examiner indicated that including the features of previously pending Claim 4 in the independent claims would bring this case closer to allowance and likely overcome the current rejections. However, no agreements were reached.

REJECTION UNDER 35 U.S.C. § 103

Section 103 Rejection Based On Banno et al.

Claims 1-7, 10, and 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Banno et al. (U.S. Pat. No. 6,761,925) either alone or in combination with Applicant's admitted state of the art set forth in the specification at pg. 2, paragraph [0006]. This rejection is respectfully traversed.

Independent Claims 1, 7, 10, and 11 are now amended to include the subject matter of previously pending Claim 4. Specifically, Claims 1, 7, 10, and 11 are now amended to recite, in part and with reference to Figures 3 and 4, “wherein the film patterns are line-shaped patterns, side portions [Wa and Wb] in a line-width direction of the film patterns are first formed, and then central portions [Wc] of the film patterns are formed” (emphasis added).

Applicant’s invention provides numerous advantages over the prior art. As set forth in the Background section of Applicant’s application, prior art methods for forming film patterns typically form, in a line extending direction, either the two ends of the line first before forming the center of the line, or the center of the line first with the two ends of the line formed thereafter. Forming film patterns in this manner presents a number of problems.

For example, forming multiple film patterns in this manner may result in lack of uniformity in thickness and appearance between the different patterns. This poses a significant problem when forming multiple film patterns along a substrate in close proximity to each other as two or more film patterns may converge. Further, forming patterns in this manner may cause the line patterns to have varying widths in the line extending direction. See paragraph [0006] of the Background section of Applicant’s application.

The methods of the present invention overcome the deficiencies of prior art methods. Specifically, using the methods set forth in independent Claims 1, 7, 10, and 11, multiple patterns each having a uniform thickness and appearance can be formed. See paragraph [0006] of the Background section of Applicant’s application.

This permits multiple line patterns to be formed along a substrate in close proximity to each other without two or more line patterns converging.

Numerous features of the present invention contribute to provide the above stated advantages, and others. Examples of such features include, as set forth in each of the independent claims and as illustrated in Figures 3 and 4, “wherein a periphery portion [Wa and Wb] of the film patterns is formed before an interior portion [Wc] of the film patterns; and “wherein the film patterns are line-shaped patterns, side portions [Wa and Wb] in a line-width direction of the film patterns are first formed, and then central portions [Wc] of the film patterns are formed” (emphasis added).

Thus, Applicant's method is not anticipated or suggested by the prior art acknowledged in the Background section of Applicant's invention. Specifically, the prior art discussed in Applicant's application forms film patterns by forming, in a line extending direction, either the two ends of the line first before forming the center of the line or forming the center of the line first with the two ends of the line formed thereafter. The prior art discussed by Applicant fails to disclose or suggest, as set forth in independent Claims 1, 7, 10, and 11, “wherein a periphery portion [Wa and Wb] of the film patterns is formed before an interior portion [Wc] of the film patterns; and “wherein the film patterns are line-shaped patterns, side portions [Wa and Wb] in a line-width direction of the film patterns are first formed, and then central portions [Wc] of the film patterns are formed” (emphasis added).

Section 103 Rejection Based On Banno et al.

The Office Action acknowledges that Banno et al. “fails to specifically teach forming the periphery portion of the film prior to the interior portion of the film.” Office

Action at 3. The Banno et al. reference simply appears to teach that film droplets can be deposited in an arbitrary order and that “dots may be deposited at every other dot locations first, and then a dot may be further deposited in each space.” Col. 37, lines 34 – 39. The Banno et al. reference fails to disclose or suggest depositing lines of the drops such that, in a line-width direction, side portions of the lines are formed first and central portions of the lines are formed second. The Banno et al. references fails to disclose or suggest that the disclosed arbitrary arrangement of dots is capable of producing multiple lines having a uniform thickness and appearance that do not converge, as Applicant’s methods do.

Thus, as set forth above, neither the Banno et al. reference nor the prior art discussed in Applicant’s Background disclose or suggest the following features of amended independent Claims 1, 7, 10, and 11: “wherein a periphery portion [Wa and Wb] of the film patterns is formed before an interior portion [Wc] of the film patterns; and “wherein the film patterns are line-shaped patterns, side portions [Wa and Wb] in a line-width direction of the film patterns are first formed, and then central portions [Wc] of the film patterns are formed” (emphasis added). Therefore, the combination of the Banno et al. reference and the admitted prior art fails to render obvious amended Claims 1, 7, 10, and 11, as well as any claims dependent therefrom.

Section 103 Rejection Based On Shigeoka

Claims 1-7, 10, and 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Shigeoka (JP 09-245,689) in combination with Applicant’s

admitted state of the art, specification, pg. 2 [0006]. This rejection is respectfully traversed.

The Office Action acknowledges that the Shigeoka reference “fails to specifically teach forming the periphery portion of the film prior to the interior portion of the film.” Office Action at 4. The Shigeoka reference appears to simply disclose forming a conductive film between electrodes by depositing a plurality of dots. The Shigeoka reference fails to disclose or suggest depositing lines of the dots such that, in a line-width direction, side portions of the lines are formed first and central portions of the lines are formed second.

Thus, as set forth above, neither the Shigeoka reference nor the prior art discussed in Applicant's Background disclose or suggest the following features of amended independent Claims 1, 7, 10, and 11: “wherein a periphery portion [Wa and Wb] of the film patterns is formed before an interior portion [Wc] of the film patterns; and “wherein the film patterns are line-shaped patterns, side portions [Wa and Wb] in a line-width direction of the film patterns are first formed, and then central portions [Wc] of the film patterns are formed” (emphasis added). Therefore, the combination of the Shigeoka reference and the admitted prior art fails to render obvious amended Claims 1, 7, 10, and 11, as well as any claims dependent therefrom.

Applicant respectfully requests reconsideration and withdrawal of this Section 103 rejection of Claims 1, 7, 10, and 11, and any claims dependent therefrom.

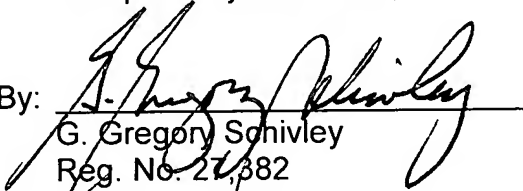
CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Dated: Feb 2, 2007

Respectfully submitted,

By:


G. Gregory Schivley
Reg. No. 27,382
Bryant E. Wade
Reg. No. 40,344

HARNESS, DICKEY & PIERCE, P.L.C.
P.O. Box 828
Bloomfield Hills, Michigan 48303
(248) 641-1600

[GGS/BEW/BGS/cn]